



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

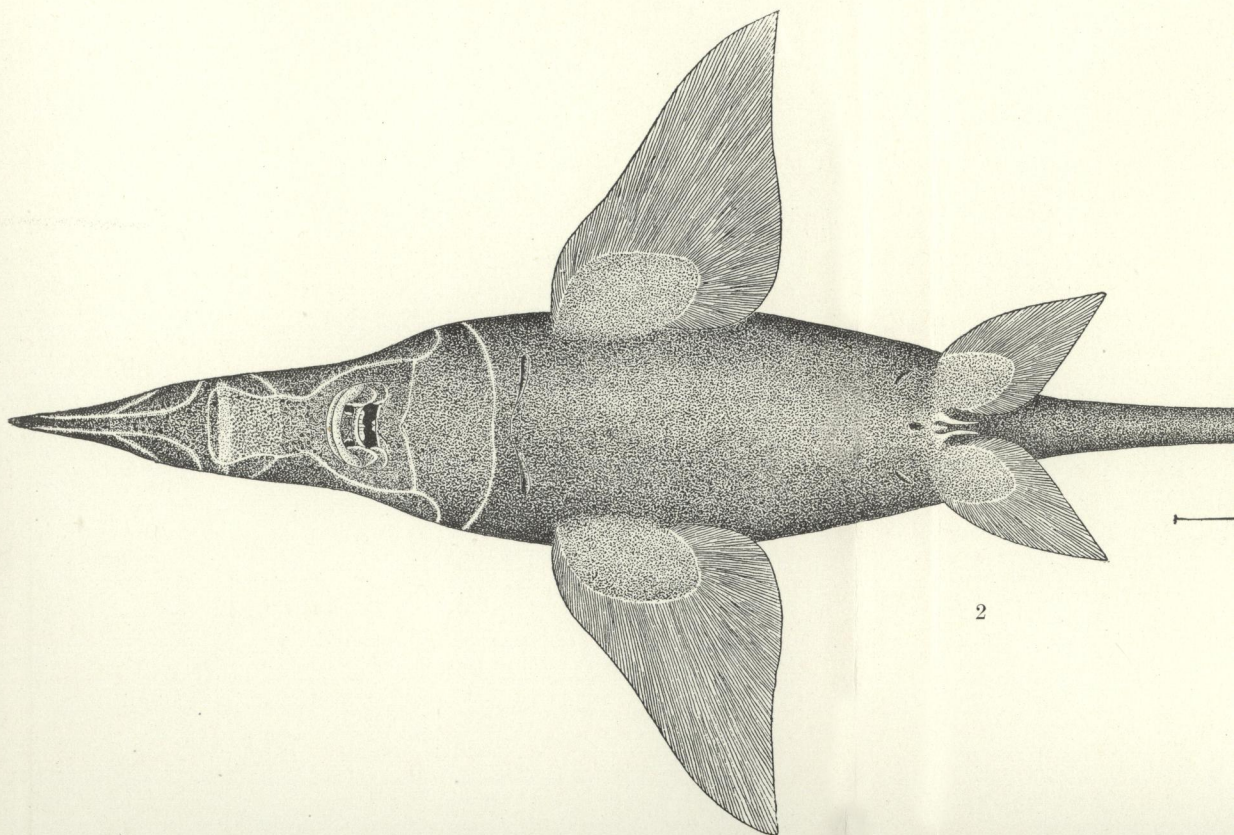
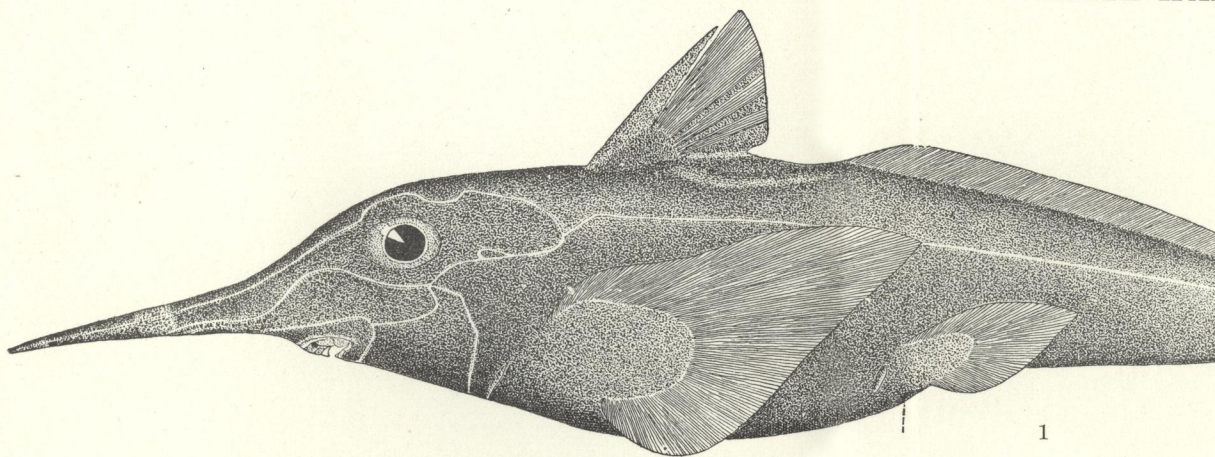
JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ZOOLOGY.

The Senses of *Pilumnus*.—The observations of M. Émile Racovitza prove that the otocyst of *Pilumnus hirtellus*, a small crab living in the rocks off Cape Abeille, near Banyuls, is an organ for feeling vibrations rather than for hearing. The crab feeds on small bivalves which live in holes in the rocks. When the bivalve moves its shell scrapes the rock and the vibration is communicated to the crab in his hole, whereupon he promptly sallies forth and proceeds in the direction of his prey, feeling for it with his claws. He appears to recognize his food by the sense of touch rather than sight, since any object used to scratch the rock will attract the crab and be seized by him as readily as if it were his favorite bivalve food. (*Comptes rendus de l'Acad. d. Sci.*, CXVIII).

More Deep-Sea Fishes.—In the last number of the NATURALIST, we referred to the publication by Messrs Goode & Bean, of the U. S. Fish Commission, of some remarkable forms of deep-sea fishes dredged by the U. S. steamer Albatross. These were *Hariotta*, a new genus of *Chimæroidei*, at depths varying from 700 to 1000 fathoms; *Rondletia*, a new genus of *Iniomi*, from 1600 fathoms; and *Cetomimus*, also of the *Iniomi*, at from 1000 to 1500 fathoms. In the present number of the NATURALIST, we give figures of these remarkable forms, thanks to the Hon. Marshall MacDonald, U. S. Commissioner of Fisheries. We add to these, figures of three remarkable forms of the order *Opisthomi*, belonging to the families *Notacanthidae* and *Lipogeniidae*, the latter a new family defined by Prof. Gill. Two new genera of the former are called *Gigliola* and *Macdonaldia* respectively, and they are quite distinct from *Notacanthus*. *Lipogenys* possesses a peculiar suctional mouth structure. The mandibular bones are said to be attached to the extremities of the maxillary, and to be "free behind." The lips are thick, rugose and contractile, and there are no teeth. The spinous dorsal fin is very short, and the eye is rather small. The only species is the *L. gillii*, which was taken at a depth of 865 fathoms.

We should have preferred seeing some more-conspicuous zoölogists commemorated by these discoveries than Harriott and Rondelet; and we have a feeling that gentlemen who have passed over to the majority like these two and Sir Walter Raleigh, do not appreciate the compliment as much as they would have done had they been still with us.



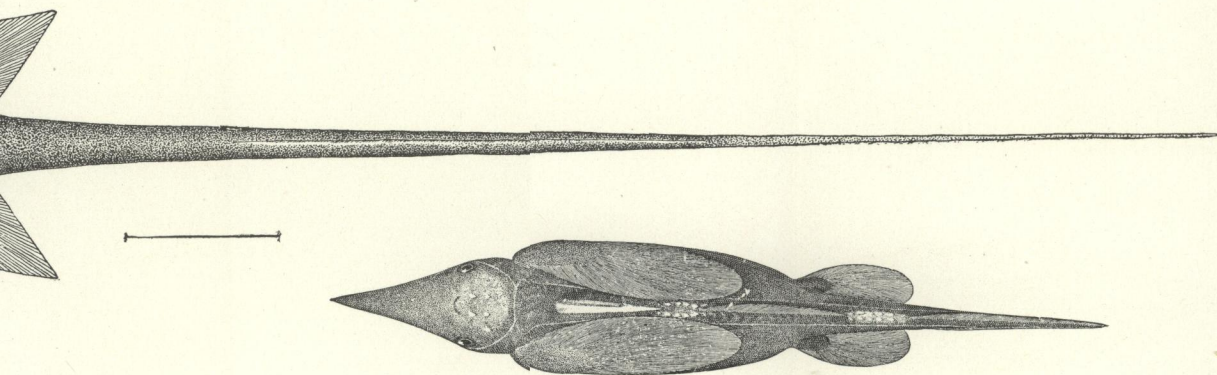
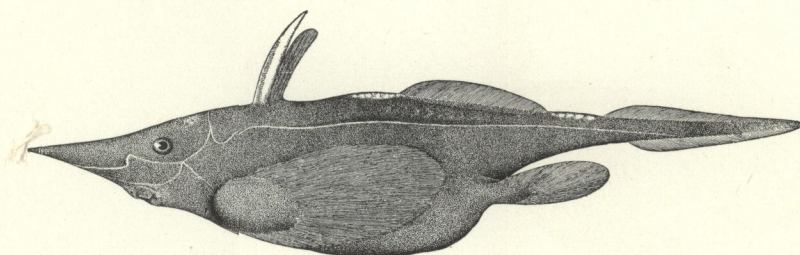
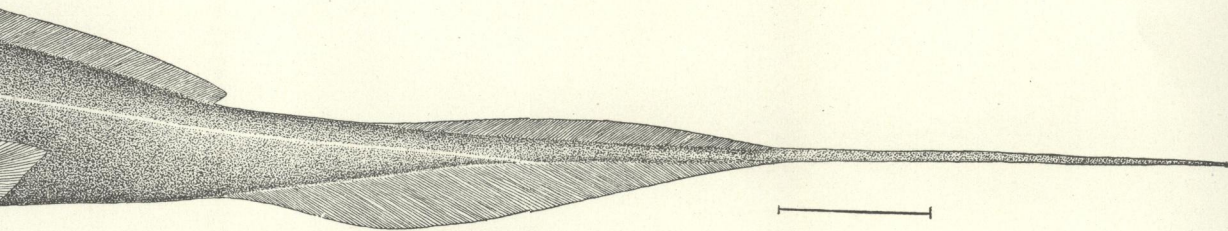
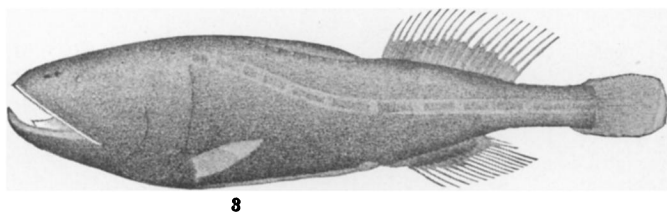
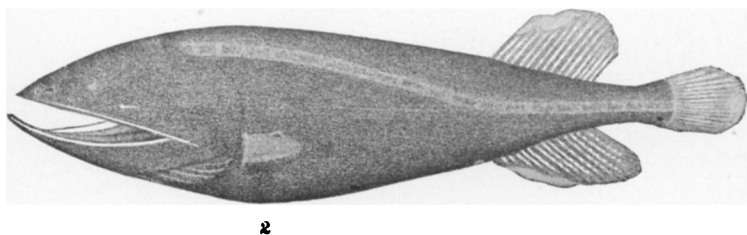
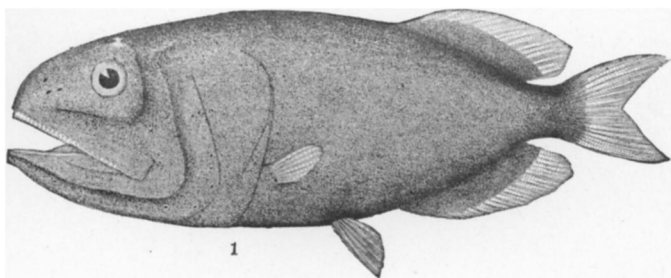
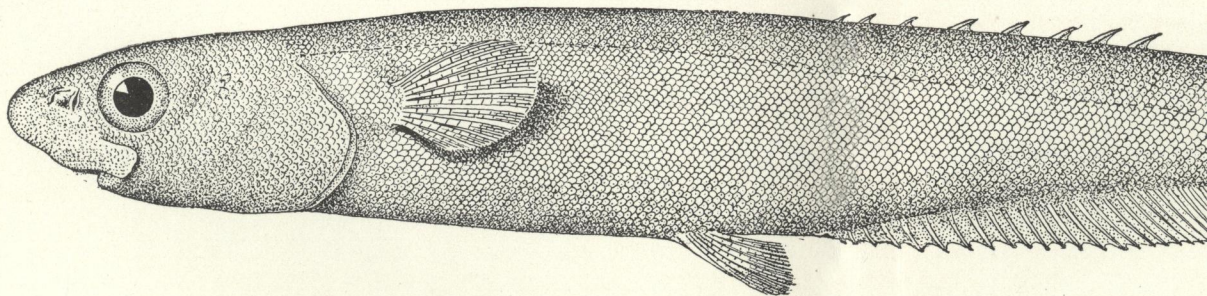


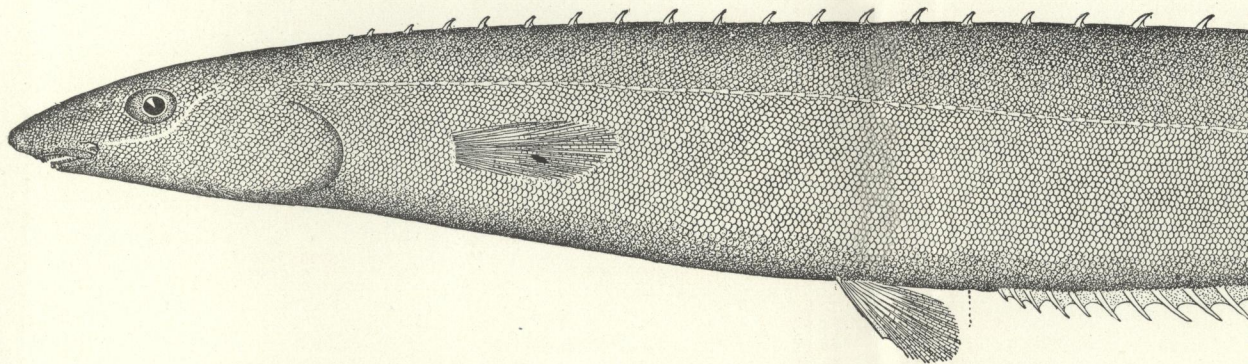
PLATE XX.



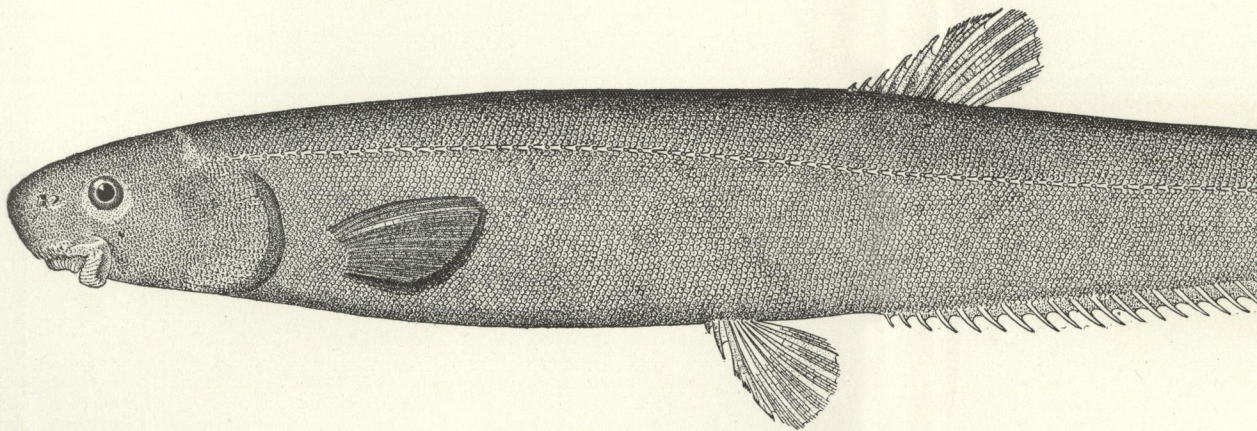
1. *Rondeletia bicolor* G. & B. 2. *Cetomimus gillii* G. & B.
3. *Cetomimus storerii* G. & B.



1

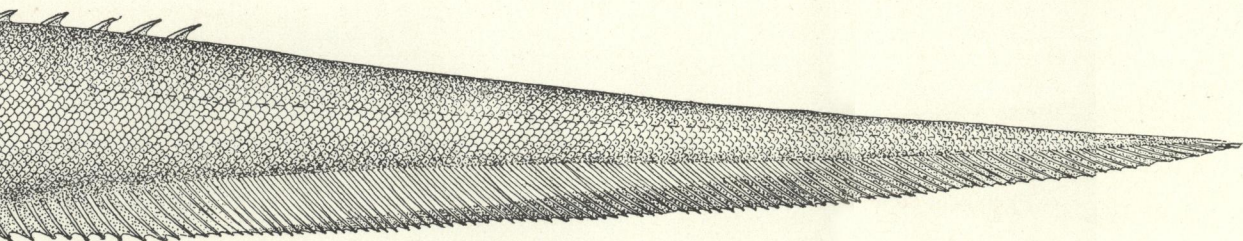


2

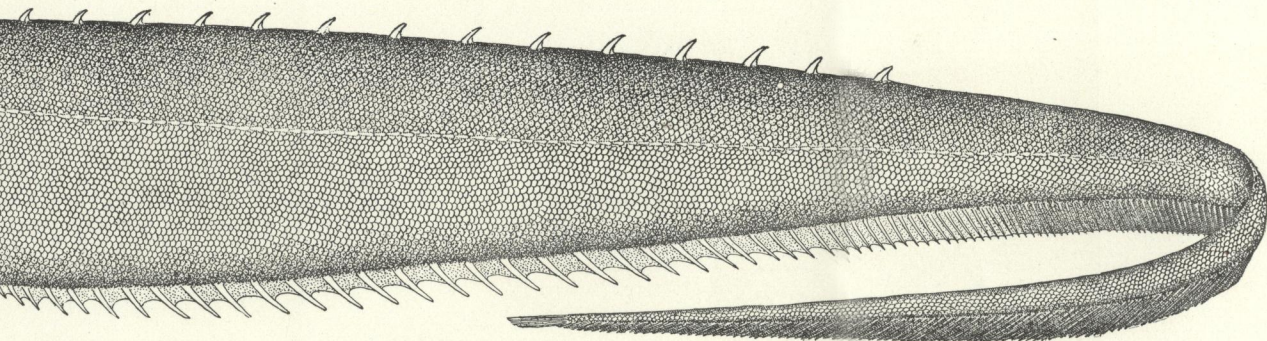


3

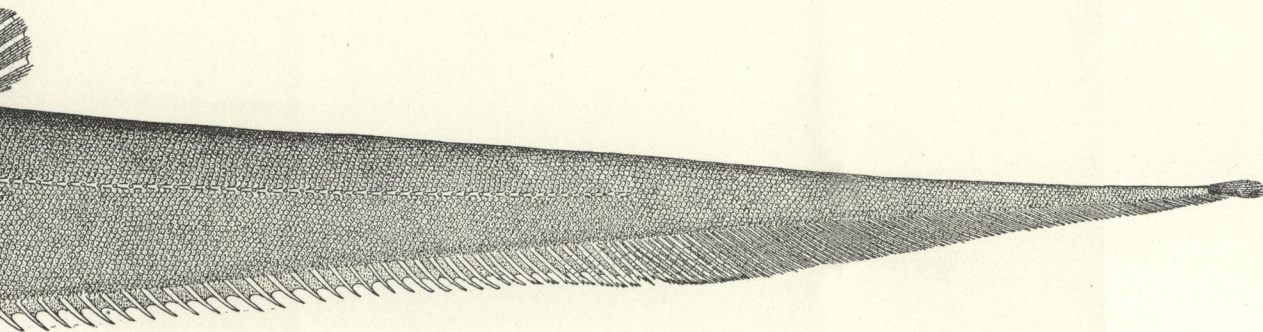
1. *Gigliolia moselyi* G. & B. 2. *Macdonaldia rostrata* G.



1



2



3

Destruction of Food Fishes.—A gradual diminution of salt-water food fishes is reported all along the eastern coast of the United States. This destruction is caused by willful violation of game laws. The fish phosphate factories cause the disappearance of immense quantities of bluefish, bass and scup. The gill nets at the entrance to bays and harbors have almost exterminated the striped bass, which was once very plentiful, while early every spring pound nets are set for alewives, flatfish, smelts and flounders, and these are caught by the ton and spread upon the land as a fertilizer. The most destructive nets probably are the pounds, since they are made of fine meshed netting and cover an immense area. In some instances these nets are 4000 feet in length, and naturally catch immense quantities of cunners, killies, butterfish, white perch and young fry of the blackfish and sea bass which frequent our waters. It is to be hoped that stringent game laws will be adopted and that they will be stringently enforced. (*Scientific American*, Jan. 12, 1895).

A Swallow Roost at Waterville, Maine.—The following interesting account of a Swallow Roost is given by A. F. C. Bates in the January number of *The Auk*.

Not far from where a small stream called the Messalonskee joins the Kennebec River, one may see at evening, from the middle of July to about the third week in September, an interesting sight in the bird line.

The willow trees along the banks of this stream, particularly a close row some five or six hundred feet in length, form the roosting place of vast numbers of swallows. During the forenoon and early afternoon very few swallows are to be seen in the sky—indeed they are conspicuous by their absence—but a little before sunset the birds begin to arrive in the vicinity, flying, sailing, chasing each other around in the upper air, everywhere within the eye's reach. From north and south, east and west, in they come out of the distance till one thinks the barns, banks, martin-houses and swallow nests of whatever description all over Maine must have yielded up their inmates. Shortly after sunset they gather more nearly in the region directly above the trees, incomers from every point of the horizon still joining them, and toward the last exhibiting great hurry and intentness, as if fearful of being "late to meeting."

Then begin movements that are the most interesting feature of this gathering. At intervals *clouds* of swallows will evolve something like order out of their numbers and perform *en masse* some of the most

fantastic curves, spirals, counter-marches, snakelike twists and turns, with the sky for a background, that ever a company of genus *Homo* executed on a finely polished floor. For instance, one evening they separated into two parts, one going to the right, the other to the left, each division making a grand circle outward, then joining again for a forward movement. There were some stragglers, but the figure was distinct and was twice performed, with other evolutions interspersed. Then a long, snake-like movement from the upper air down, very slightly inclined from the vertical, with two twists in it, a loop around a tall tree farther down the stream and back, brought them into the tree-tops for roosting. That was the cleanest and most astonishing figure I ever saw them perform. Occasionally they drop down into the trees like pieces of paper, but oftener the final alighting is a combined movement, sometimes in the shape of an inverted cone—usually in a grand sweep after their most elaborate evolution. Frequently they swoop out from the trees company after company, several times before the last settling, their wings not only making a tremendous whirring, but a perceptible movement of the air. Their chattering keeps up from half to three-quarters of an hour after they settle in the trees, and their dark little bodies against the sunset sky look as numerous as the leaves. Often they weigh down a branch and then a great chattering, scolding and re-adjustment ensues. Sometimes there is a movement through the tree-tops to one spot as if a conference were called, and a more surprising amount of chattering than before. Then in a few minutes back they come till the tree-tops are about equally full. The noise which they make is suggestive of the whirring of looms in a cotton mill, heard through the open windows, or of some kinds of water-falls.

They leave the trees in the morning a little before sunrise. August 26th we watched them go out. At 4.15 there were sounds as if of awakening and gradually the noise increased. At 4.25 they began to arise in companies at intervals of two or three minutes. They did not remain long in the locality and by five o'clock not one was to be seen.

The Distribution of Seeds by Birds.—I have just sent a MS on The Dissemination of *Yucca aloifolia* to Professor Trelease for publication in the Missouri Botanical Garden Reports. My attention has been called to certain observations therein of a zoological nature that seem rather remarkable. I am convinced that the observations are correct, but am not informed on the literature of the subject and thus

do not know whether to consider the facts novel or not. Probably you may be able to inform me in regard to the subject.

In connection with my work on dissemination, I was led to feed a captured mocking-bird on various fleshy fruits. I found that they apparently digest their material with what would seem to me great rapidity. As illustrations, I fed the bird with some 15 seeds of *Yucca aloifolia*, noting the time when they were swallowed. One of these seeds, and there could be no mistake, was evacuated in slightly over 15 minutes after the first seed was swallowed, and the majority of the seeds were evacuated by the end of half an hour. At another time some 15 seeds were given to the bird and the majority were evacuated in half an hour and all in an hour. The bird was given access to an entire *Yucca* fruit and ate and evacuated 51 seeds in about 4 hours.

I tested the bird also with poke berries (*Phytolacca decandra*) and found that all excrement became stained in a very few minutes, while the seeds usually began to be evacuated in considerable numbers in half an hour and the majority had passed in three-quarters of an hour. The same held true with the seeds of *Durania plumeri* and *Melia azederach*.

The question then is whether the evacuation of seeds in from 15 minutes to half an hour, making the entire passage of the alimentary canal in that time, would be considered at all uncommon. It may be that such fruits have a purgative effect on the bird and hasten matters somewhat. I would be greatly obliged for your opinion on this subject. I merely mention the thing incidentally in my paper, but my observations were carefully made.

H. J. WEBBER.

The Effects of Cold.—L'Éleveur reports that the wild boars, which are very numerous in the forests of Luxembourg, driven by cold and hunger, roam through the streets of the villages. Also that the wolves have come down from the Vosges Mountains to the plains in vast numbers. If these animals are experiencing such suffering through cold, it is not surprising to hear that the game birds in the preserves of Marly and of Rambouillet are perishing from the same cause. Each day the guards find great numbers of pheasants and partridges frozen to death. In this connection is mentioned a singular fact observed by an English farmer. He owned four peacocks which were in the habit of coming at his call. He noticed that for two days one was missing. The third day he saw two of the peacocks vigorously scratching away the snow to the depth of a meter. On going to

their assistance he found the missing bird buried in the snow and fastened down to the ground by his tail, which was frozen in a pool of water. A few hours after his release the peacock had perfectly recovered. (*Revue Scientifique*, Fev., 1895).

Zoological News.—A study of the Crista of the large intertropical Trombidiums (*T. tinctorium*, etc.) leads Dr. Trouessart to the conclusion that the organ in question is not only an organ of hearing, but that it is also the remnant of the median anterior eye, now atrophied. This example of organs of different senses joined together by growth is unique among Arthropods, although there are cases among certain insects where antennae are found inserted near the centre of the eyes. (*Bull. Soc. Entomol.*, Paris, 1894).

In Chapman's "Guide to a Collection of Birds found within 50 miles of New York City," it is stated that 348 species are known within that radius, and these are classified as follows: Permanent residents 35; summer residents 92; winter residents 36; summer visitants 18; winter visitants 16; regular transient visitants 82, irregular 30; accidental 39. The collection belongs to the American Museum of Natural History.